

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

3

Applicant's or agent's file reference Case 667 PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE99/00516	International filing date (day month year) 30.03.1999	Priority date (day month year) 01.04.1998
International Patent Classification (IPC) or national classification and IPC ⁷ H 04 L 29/06, H 04 L 9/32, G 06 F 1/00		
Applicant Telia AB (publ) et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 01.11.1999	Date of completion of this report 29.08.2000
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88	Authorized officer Christina Halldin/LR Telephone No. 08-782 25 00

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00516

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☒ the international application as originally filed.
- ☐ the description, pages _____, as originally filed,
 pages _____, filed with the demand,
 pages _____, filed with the letter of _____,
 pages _____, filed with the letter of _____.
- ☐ the claims, Nos. _____, as originally filed,
 Nos. _____, as amended under Article 19,
 Nos. _____, filed with the demand,
 Nos. _____, filed with the letter of _____,
 Nos. _____, filed with the letter of _____.
- ☐ the drawings, sheets/fig _____, as originally filed,
 sheets/fig _____, filed with the demand
 sheets/fig _____, filed with the letter of _____,
 sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00516

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	<u>1-44</u>	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	<u>1-44</u>	NO
Industrial applicability (IA)	Claims	<u>1-44</u>	YES
	Claims		NO

2. Citations and explanations

The invention relates to a telecommunications system employing electronic security badges to provide temporary access to a computer system protected by firewalls. The object of the invention is to solve the problem of providing flexible, user friendly, access without compromising the security.

According to the invention the badge establishes a reliable contact from which only trustworthy instructions will emanate, i.e. the instructions will only come from an approved and security cleared visitor. Initial contact between a visitor and the host, i.e. an individual responsible for operation of the host computer, is established via a telephone conversation over the PSTN. Visitor and host agree on a password, or code word. The code is added, possibly in encrypted form, to the source code of an electronic badge. The electronic badge may be a Java applet, which is compiled and placed on a web server protected by the password. When download onto a visitor's computer, the electronic badge mediates communication between the visitor's computer and a protected host computer.

Documents cited in the international search report:

[D1] WO 9716911, A1

[D2] Andrew S. Tanenbaum Computer Networks, Third edition, 1996 by Prentice-hall inc.,
Upper Saddle River, New Jersey.

D1 relates to a method of directing an internal computer system that involves authenticating a connection initiated by the internal computer system to an external computer system. The external computer system calls a transaction request received by the external computer system.

.../...

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

An original process environment, containing process environment variables, is created in response to the request. A string is then formed which comprises the transaction request and the process environment variables for executing the transaction request. The string is then transmitted by the external system to the internal system, through the authenticated connection. The transaction request is verified by the internal system. The original process environment is then recreated by the internal system and the transaction request is executed (see abstract; page 1, line13-page 2, line 40; page 4, line 37-page 6, line58 and claims 1-10).

The invention according to claims 1, 16 and 32 differs from D1 by describing measures that are considered obvious to a person skilled in the art. It is mentioned in D1 that the method directs an internal computer system to allow an external computer system to initiate a transaction request using internal resources without violating a security firewall between the systems. Additionally, it is mentioned that the method includes of authenticating a connection initiated by the internal computer system between the internal computer system and the external computer system, thereby establishing an authenticated connection.

The invention according to dependent claims 2-4, 17-19 and 33-35 includes only steps that are common and thereby considered obvious to a person skilled in the art. It is a common procedure in most of the local networks to include a protection firewall or to include admission and application computer on a single data processing machine. Letting a firewall to control the communication is the main purpose of using a firewall.

The invention according to dependent claims 5-7, 13, 20-22 and 36-38 differs from D1 only by steps that are obvious to a person skilled in the art, when taking considerations to D2. It is mentioned in D2 that the idea with Java-"applets", as a smaller applications program, that is to be downloaded from the Internet and executed in a safe way. It is in the "definition" of the "applet" that it is not able to read or write files that the program has no authorisation to (see D2, page 706-709). Thus, to implement such functions into the system described in D1 is obvious.

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00516

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

The invention according to dependent claims 8-12, 14, 15, 23-27, 31 and 39-44 describes only measures that are considered obvious to a person skilled in the art. It is not considered to include an inventive step to connect a panel to a web server, and to include a database of access rules, or to make the connections as claimed for. It is mentioned in D1, that condition data is buffered and that the system includes both internal and external databases. Password protection means to said web server, are a must in most web servers, and mentioned in D1.

It is also obvious to a person skilled in the art to create a panel for controlling the electronic visitor's badge.

The invention according to dependent claims 24 and 28-30 includes only steps that are considered obvious to a person skilled in the art.

To summarise:

With reference to D1 and D2, the invention according to claims 1-44 is considered not to include an inventive step.

PCT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

PRAGSTEN, Rolf
Telia Research AB
Corporate Patent Dept.
Vitsandsgatan 9
S-123 86 Farsta
SUÈDE

Date of mailing (day/month/year) 03 June 1999 (03.06.99)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference Case 667 PCT	
International application No. PCT/SE99/00516	International filing date (day/month/year) 30 March 1999 (30.03.99)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 01 April 1998 (01.04.98)
Applicant TELIA AB (publ) et al	

- The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
- An asterisk(*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed to Rule 17.1(c)** which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed to Rule 17.1(c)** which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
01 April 1998 (01.04.98)	9801151-3	SE	18 May 1999 (18.05.99)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

Athina Nickitas-Etienne

Telephone No. (41-22) 338.83.38

PCT

NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

PRAGSTEN, Rolf
Telia Research AB
Corporate Patent Dept.
Vitsandsgatan 9
S-123 86 Farsta
SUÈDEInwon Kgp
Telia Research AB

1999-10-15

Date of mailing (day/month/year) 07 October 1999 (07.10.99)		
Applicant's or agent's file reference Case 667 PCT		IMPORTANT NOTICE
International application No. PCT/SE99/00516	International filing date (day/month/year) 30 March 1999 (30.03.99)	
		Priority date (day/month/year) 01 April 1998 (01.04.98)
Applicant TELIA AB (publ) et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
EP,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:
EE,LT,LV,NO

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on
07 October 1999 (07.10.99) under No. WO 99/51003

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer J. Zahra Telephone No. (41-22) 338.83.38
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PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference Case 667 PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE99/00516	International filing date (day month year) 30.03.1999	Priority date (day month year) 01.04.1998
International Patent Classification (IPC) or national classification and IPC ₇ H 04 L 29/06, H 04 L 9/32, G 06 F 1/00		
Applicant Telia AB (publ) et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 01.11.1999	Date of completion of this report 29.08.2000
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88 Form PCT/IPEA/409 (cover sheet) (January 1994)	Authorized officer Christina Halldin/LR Telephone No. 08-782 25 00

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00516

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☒ the international application as originally filed.
- ☐ the description, pages _____, as originally filed,
 pages _____, filed with the demand,
 pages _____, filed with the letter of _____,
 pages _____, filed with the letter of _____.
- ☐ the claims, Nos. _____, as originally filed,
 Nos. _____, as amended under Article 19,
 Nos. _____, filed with the demand,
 Nos. _____, filed with the letter of _____,
 Nos. _____, filed with the letter of _____.
- ☐ the drawings, sheets/fig _____, as originally filed,
 sheets/fig _____, filed with the demand
 sheets/fig _____, filed with the letter of _____,
 sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00516

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-44</u>	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	<u>1-44</u>	NO
Industrial applicability (IA)	Claims	<u>1-44</u>	YES
	Claims		NO

2. Citations and explanations

The invention relates to a telecommunications system employing electronic security badges to provide temporary access to a computer system protected by firewalls. The object of the invention is to solve the problem of providing flexible, user friendly, access without compromising the security.

According to the invention the badge establishes a reliable contact from which only trustworthy instructions will emanate, i.e. the instructions will only come from an approved and security cleared visitor. Initial contact between a visitor and the host, i.e. an individual responsible for operation of the host computer, is established via a telephone conversation over the PSTN. Visitor and host agree on a password, or code word. The code is added, possibly in encrypted form, to the source code of an electronic badge. The electronic badge may be a Java applet, which is compiled and placed on a web server protected by the password. When download onto a visitor's computer, the electronic badge mediates communication between the visitor's computer and a protected host computer.

Documents cited in the international search report:

[D1] WO 9716911, A1

[D2] Andrew S. Tanenbaum Computer Networks, Third edition, 1996 by Prentice-hall inc.,

Upper Saddle River, New Jersey.

D1 relates to a method of directing an internal computer system that involves authenticating a connection initiated by the internal computer system to an external computer system. The external computer system calls a transaction request received by the external computer system.

.../...

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

An original process environment, containing process environment variables, is created in response to the request. A string is then formed which comprises the transaction request and the process environment variables for executing the transaction request. The string is then transmitted by the external system to the internal system, through the authenticated connection. The transaction request is verified by the internal system. The original process environment is then recreated by the internal system and the transaction request is executed (see abstract; page 1, line13-page 2, line 40; page 4, line 37-page 6, line58 and claims 1-10).

The invention according to claims 1, 16 and 32 differs from D1 by describing measures that are considered obvious to a person skilled in the art. It is mentioned in D1 that the method directs an internal computer system to allow an external computer system to initiate a transaction request using internal resources without violating a security firewall between the systems. Additionally, it is mentioned that the method includes of authenticating a connection initiated by the internal computer system between the internal computer system and the external computer system, thereby establishing an authenticated connection.

The invention according to dependent claims 2-4, 17-19 and 33-35 includes only steps that are common and thereby considered obvious to a person skilled in the art. It is a common procedure in most of the local networks to include a protection firewall or to include admission and application computer on a single data processing machine. Letting a firewall to control the communication is the main purpose of using a firewall.

The invention according to dependent claims 5-7, 13, 20-22 and 36-38 differs from D1 only by steps that are obvious to a person skilled in the art, when taking considerations to D2. It is mentioned in D2 that the idea with Java-"applets", as a smaller applications program, that is to be downloaded from the Internet and executed in a safe way. It is in the "definition" of the "applet" that it is not able to read or write files that the program has no authorisation to (see D2, page 706-709). Thus, to implement such functions into the system described in D1 is obvious.

.../...

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00516

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

The invention according to dependent claims 8-12, 14, 15, 23-27, 31 and 39-44 describes only measures that are considered obvious to a person skilled in the art. It is not considered to include an inventive step to connect a panel to a web server and to include a database of access rules, or to make the connections as claimed for. It is mentioned in D1, that condition data is buffered and that the system includes both internal and external databases. Password protection means to said web server, are a must in most web servers, and mentioned in D1.

It is also obvious to a person skilled in the art to create a panel for controlling the electronic visitor's badge.

The invention according to dependent claims 24 and 28-30 includes only steps that are considered obvious to a person skilled in the art.

To summarise:

With reference to D1 and D2, the invention according to claims 1-44 is considered not to include an inventive step.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference Case 667 PCT	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">FOR FURTHER ACTION</div> <div style="font-size: small;">see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</div> </div>	
International application No. PCT/SE 99/00516	International filing date (<i>day/month/year</i>) 30 March 1999	(Earliest) Priority Date (<i>day/month/year</i>) 1 April 1998
Applicant Telia AB (publ) et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I).

2. ☐ Unity of invention is lacking (See Box II).

3. ☐ The international application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the international search was carried out on the basis of the sequence listing

☐ filed with the international application.
☐ furnished by the applicant separately from the international application,

☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐ transcribed by this Authority.

4. With regard to the title, ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:
 Figure No. 1

☒ as suggested by the applicant.

☐ None of the figures.

☐ because the applicant failed to suggest a figure.
☐ because this figure better characterizes the invention.

1
INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 99/00516

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: H04L 29/06,, H04L 9/32, G06F 1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: H04L, G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 9716911 A1 (INTERNATIONAL BUSINESS MACHINES CORPORATION), 9 May 1997 (09.05.97)	1,3,16,18,32,34
A	--	2,4,8-11,17,19,23-30,33,35,39-42
X	Andrew S. Tanenbaum Computer Networks Third edition, 1996 by Prentice-Hall inc., Upper Saddle River, New Jersey see especially pages 706-709	5-7,12-15,20-22,31,36-38,43,44
A	see especially pages 706-709	2,4,8-11,17,19,23-30,33,35,39-42

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

24 November 1999

Date of mailing of the international search report

07-12-1999

Name and mailing address of the ISA:

**Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM**

Facsimile No. +46 8 666 02 86

Authorized officer

Erik Johannesson/MN

Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT
Information on patent family members

02/11/99

International application No.

PCT/SE 99/00516

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9716911 A1	09/05/97	CA 2233441 A	09/05/97
		CN 1201573 A	09/12/98
		CZ 9801141 A	14/10/98
		EP 0872097 A	21/10/98
		HU 9802414 A	01/02/99
		JP 10512696 T	02/12/98
		PL 327446 A	07/12/98
		US 5826029 A	20/10/98



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

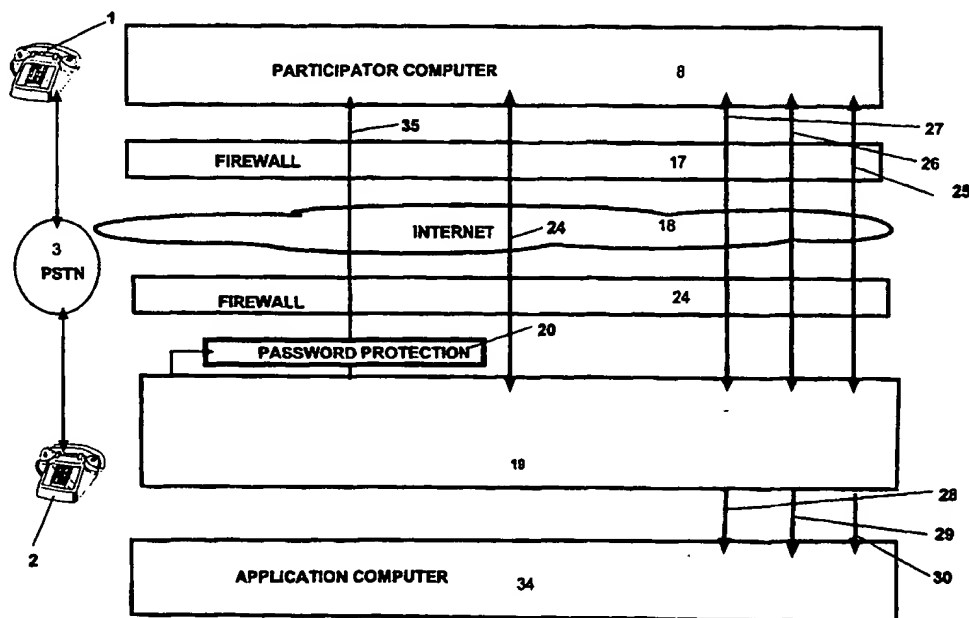
(51) International Patent Classification ⁶ : H04L 29/06, 9/32, G06F 1/00		A3	(11) International Publication Number: WO 99/51003
			(43) International Publication Date: 7 October 1999 (07.10.99)
(21) International Application Number: PCT/SE99/00516		(81) Designated States: EE, LT, LV, NO, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(22) International Filing Date: 30 March 1999 (30.03.99)			
(30) Priority Data: 9801151-3 1 April 1998 (01.04.98) SE		Published With international search report.	
(71) Applicant (for all designated States except US): TELIA AB (publ) [SE/SE]; Mårbackagatan 11, S-123 86 Farsta (SE).		(88) Date of publication of the international search report: 24 August 2000 (24.08.00)	
(72) Inventor; and (75) Inventor/Applicant (for US only): GRINNEBY, Stefan [SE/SE]; Sturegatan 16B, S-752 23 Uppsala (SE).			
(74) Agent: PRAGSTEN, Rolf; Telia Research AB, Corporate Patent Dept., Vitsandsgatan 9, S-123 86 Farsta (SE).			

(54) Title: IMPROVEMENTS IN, OR RELATING TO, ELECTRONIC BADGES

(57) Abstract

The present invention makes an electronic visitor's badge available to a person visiting a host computer protected by firewalls, and solves the problem of providing flexible, user friendly, access without compromising security. The present invention permits persons located behind an address translating firewall, which only allows HTTP, to obtain controlled access to privileged data information without compromising data security. The badge establishes a reliable contact from which only trustworthy instructions will emanate, i.e. the instructions will only come from an approved and security cleared visitor. Initial contact between a visitor and the host, i.e. an individual

responsible for operation of the host computer, is established via a telephone conversation over the PSTN. Visitor and host agree on a password, or code word. The code is added, possibly in encrypted form, to the source code of an electronic badge. The electronic badge may be a Java applet which is compiled and placed on a webserver protected by the password. When downloaded onto a visitor's computer, the electronic badge mediates communication between the visitor's computer and a protected host computer. The present invention can be used in any situation where individuals wish to work on a common computer and it is not possible to exchange hardware, but the individuals are able to recognize each others voices. The invention facilitates secure control of access to a secure computer facility via exchange of identity badges over the internet.



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INTERNATIONAL SEARCH REPORT

International application No. -

PCT/SE 99/00516

A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: H04L, G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 9716911 A1 (INTERNATIONAL BUSINESS MACHINES CORPORATION), 9 May 1997 (09.05.97)	1,3,16,18,32,34
A	--	2,4,8-11,17,19,23-30,33,35,39-42
X	Andrew S. Tanenbaum Computer Networks Third edition, 1996 by Prentice-Hall inc., Upper Saddle River, New Jersey see especially pages 706-709	5-7,12-15,20-22,31,36-38,43,44
A	see especially pages 706-709	2,4,8-11,17,19,23-30,33,35,39-42
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☐ Further documents are listed in the continuation of Box C.

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9716911 A1	09/05/97	CA 2233441 A	09/05/97
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		US 5826029 A	20/10/98
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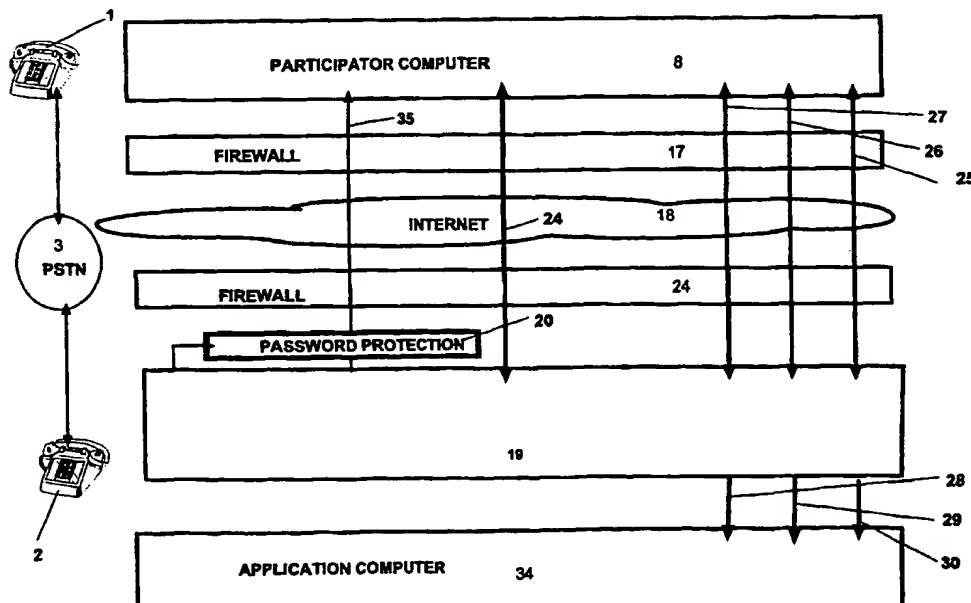
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(54) Title: IMPROVEMENTS IN, OR RELATING TO, ELECTRONIC BADGES

(57) Abstract

The present invention makes an electronic visitor's badge available to a person visiting a host computer protected by firewalls, and solves the problem of providing flexible, user friendly, access without compromising security. The present invention permits persons located behind an address translating firewall, which only allows HTTP, to obtain controlled access to privileged data information without compromising data security. The badge establishes a reliable contact from which only trustworthy instructions will emanate, i.e. the instructions will only come from an approved and security cleared visitor. Initial contact between a visitor and the host, i.e. an individual

responsible for operation of the host computer, is established via a telephone conversation over the PSTN. Visitor and host agree on a password, or code word. The code is added, possibly in encrypted form, to the source code of an electronic badge. The electronic badge may be a Java applet which is compiled and placed on a webserver protected by the password. When downloaded onto a visitor's computer, the electronic badge mediates communication between the visitor's computer and a protected host computer. The present invention can be used in any situation where individuals wish to work on a common computer and it is not possible to exchange hardware, but the individuals are able to recognize each others voices. The invention facilitates secure control of access to a secure computer facility via exchange of identity badges over the internet.



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Improvements In, or Relating to, Electronic Badges

The present invention relates to a telecommunications system employing electronic security badges to provide temporary access to a computer system protected by firewalls, methods of providing temporary, controlled, access to a secure computer system, and an administration computer architecture for use with a telecommunications system employing electronic security badges.

With modern data communications technology, it is frequently desirable to give a site visitor access to a secure computer system over electronic transmission systems. For example, it may be desirable to hold a conference, or virtual meeting, in cyberspace, which is hosted on a secure computer, to which general public access is denied for security reasons. In such a meeting, it may be necessary for a visitor to run applications software on the host computer. However, the person hosting such a meeting may well wish to limit a visitor's access to a certain set of the applications available on the host computer. If access to the host computer is given to a visitor, this will, to some extent, compromise the security of the host computer, unless special steps are taken to protect the host computer.

Existing systems for providing access to computers protected by firewalls are either inflexible and difficult for a visitor to use, or ineffective in terms of preserving the security of the home computer.

The present invention makes an electronic visitor's badge available to a person visiting a host computer protected by firewalls, and solves the problem of providing flexible, user friendly, access without compromising security. The present invention permits persons located behind an address translating firewall, which only allows HTTP, to obtain controlled access to privileged data information without compromising data security. The badge establishes a reliable contact from which only trustworthy instructions will emanate, i.e. the instructions will only come from an approved and security cleared visitor.

Initial contact between a visitor and the host, i.e. an individual responsible

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for operation of the host computer, is established via a telephone conversation over the PSTN. Visitor and host agree on a password, or code word. The code is added, possibly in encrypted form, to the source code of an electronic badge. The electronic badge may be a Java applet which is compiled and placed on a webserver protected by the password. When this "applet" is run via port 80, i.e. the port used for communication through a firewall, the code in the control server is correlated to the code presented by the badge, in other words, it does not matter that the firewall between visitor and host has changed the IP address.

The present invention can be used in any situation where individuals wish to work on a common computer and it is not possible to exchange hardware, but the individuals are able to recognize each others voices. The invention facilitates secure control of access to a secure computer facility via exchange of identity badges over the Internet.

The present invention strengthens the link between three security elements:

- voice recognition;
- knowledge of a password; and
- possession of an electronic badge - i.e. an applet

and manages a translating/masking firewall, via port 80.

According to a first aspect of the present invention, there is provided a telecommunications system adapted to act as a platform for electronic meetings, comprises a visitor's computer, an administration computer, an application computer, a firewall protecting said application computer and a transmission path over the Internet, characterised in that communications between said visitor's computer and said application computer are mediated by an electronic badge generated by said administration computer and operating on said visitor's computer.

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Said administration computer and application computer may be realised on a single data processing machine.

Alternatively, said administration computer and application computer may be distinct data processing machines, and communications between said visitor's computer and said application computer may be controlled by a firewall located in said administration computer.

Said administration computer may be protected by a firewall.

Said electronic badge may be an applet containing data identifying a visitor, a password, and a list of access rights relating to software applications running on said application computer.

Said list of access rights may permit access to one, or more, software applications.

Said applet may be adapted to run on said visitor's computer and cause one, or more, icons to be displayed on a VDU associated with said visitor's computer.

Said administration computer may include a control panel linked to a web server adapted to issue electronic badges.

Said administration computer may include a control server linked to said control panel and said web server, and a database of access rules linked to said control server.

Said control server may be linked to a firewall protecting said application computer, and said database of access rules may be linked to said firewall protecting said application computer.

Access to said webserver may be controlled by a password protection means.

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An electronic visitor's badge may be created from said control panel and deposited for collection on said webserver.

Said visitor's computer may download said electronic visitor's badge by accessing said web server and giving a password and visitor identification.

5 Access rights associated with said visitor's badge may be altered while said visitor computer is connected to said application computer.

Said visitor's badge may be adapted to self destruct on receipt of a signal from said control server.

10 According to a second aspect to the present invention, there is provided a method of establishing access for a visitor's computer to an application computer protected by a firewall generated by an administration computer, over the Internet, characterised by mediating communications between said visitor's computer and said application computer with an electronic badge generated on said administration computer and operating on said visitor's computer.

15 Said administration computer and said application computer may be realised on a single data processing machine.

20 Said administration computer and application computer may be realised as distinct data processing machines, and communications between said visitor's computer and said application computer may be controlled through a firewall located in said administration computer.

Said administration computer may be protected with a firewall.

Said electronic badge may be an applet containing data identifying a visitor, a password, and a list of access rights relating to software applications running on said application computer.

25 Said list of access rights may permit access to one, or more, software

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applications.

Said applet may run on said visitor's computer and cause one, or more, icons to be displayed on a VDU associated with said visitor's computer.

Said administration computer may include a control panel linked to a web server adapted to issue electronic badges.

The method may include the steps of:

- establishing a voice link over the PSTN between a person operating said visitor's computer, herein referred to as a visitor, and a person operating said administration computer, herein referred to as a host;
- said host establishing that said visitor has clearance to access said application computer, and
- assigning and communicating a password to said visitor over said voice link.

Said administration computer may include a control server linked to said control panel and said web server, and a database of access rules linked to said control server.

Said control server may be linked to a firewall protecting said application computer, and said database of access rules may be linked to said firewall protecting said application computer.

Access to said webserver may be controlled by a password protection means.

Said host may create an electronic visitor's badge by actuation of said control panel and depositing said electronic visitor's badge, for collection by said visitor, on said webserver.

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Said visitor may access said webserver over the Internet, giving said password, and downloading said electronic visitor's badge.

Said method may include the steps of:

- said visitor requesting access, while connected to said application computer, to a first software application, not pre-authorised on said electronic visitor's badge;
- said control panel giving an alarm condition;
- said host confirming over said voice link that said visitor has requested access to said first software application; and
- modifying the access rights associated with said electronic visitor's badge via said control panel.

Said visitor's badge may self destruct on receipt of a signal from said control server.

According to a third aspect of the present invention, there is provided an administration computer, for use with a telecommunications system adapted to act as a platform for electronic meetings, said administration computer having a firewall protecting an application computer, characterised in that said administration computer is adapted to create an electronic badge to mediate communications between a visitor's computer and said application computer.

Said administration computer and application computer may be realised on a single data processing machine.

Said administration computer and application computer may be distinct data processing machines.

Said administration computer may be protected by a firewall.

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Said electronic badge may be an applet containing data identifying a visitor, a password, and a list of access rights relating to software applications running on said application computer.

5 Said list of access rights may permit access to one, or more, software applications.

Said applet may be adapted to run on said visitor's computer and cause one, or more, icons to be displayed on a VDU associated with said visitor's computer.

10 Said administration computer may include a control panel linked to a web server adapted to issue electronic badges.

Said administration computer may include a control server linked to said control panel and said web server, and a database of access rules linked to said control server.

15 Said control server may be linked to a firewall protecting said application computer, and said database of access rules may be linked to said firewall protecting said application computer.

Access to said webserver may be controlled by a password protection means.

20 An electronic visitor's badge may be created from said control panel and deposited for collection on said webserver.

Access rights associated with said visitor's badge may be altered while a visitor computer is connected to said application computer.

Embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

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Figure 1 illustrates, in schematic form, an overview of a telecommunications system, according to the present invention.

Figure 2 illustrates, in greater detail, the administration computer and application computer of Figure 1.

5 Figure 3 illustrates, in greater detail, the participator computer of Figure 1.

The system of the present invention may include seven main components, namely:

- a control server, 6, see the accompanying drawings;
- 10 - a control panel, 4;
- a visitor's badge, in the form of an applet, 9;
- firewalls, 17, 24 and 7;
- a webserver, 5;
- a PSTN telephone link, 1,2 and 3; and
- 15 - applications software, 13, 14 and 15.

As illustrated in the accompanying drawings, a telecommunications system which supports secure communication between a visitor's, or participator's, computer, 8, and application, or host computer, 24, has an administration computer 19. The participator computer, 8, is linked via a firewall, 17, to the Internet 18, and
20 thence through firewall, 24, to the administration computer 19. The administration computer, 19, includes a webserver, 5, for issuing visitor's badges in the form of Java applets, and is protected by a password recognition unit, 20. The administration computer includes a control panel, 4, which may take the form of a visual screen based interface, allowing an operator to control the administration
25 computer and the issue of electronic badges. Each badge is in the form of an

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applet which, when run on a visitor's computer, such as 8, includes a series of icons for a range of applications on the application computer, to which the visitor is given access rights by the electronic badge. In the case of the embodiment illustrated in the drawings, these applications include applications 13, 14, and 15 which might be MS-Netmeeting, Word 6, and Coral Draw 6.

The administration computer also includes a control server, 6, which controls a server, 16, carrying the access rules for the application computer, 34, and the firewall, 7, which protects the application computer. Access to the individual applications packages 13, 14, and 15, is controlled individually via the firewall, so that access may be granted to one, two, or all of applications 13 to 15, depending on the access rights granted to a given electronic visitor's badge. Access rights associated with an electronic badge may be altered during the course of a meeting, or conference, via the control panel and control server, giving true dynamic control.

In operation, a visitor and host speak to each other over the telephone link 1, 3, 2. They agree a password and the access rights the visitor will have. The host may identify the visitor by his/her voice, or by exchange of personal information, a PIN number, or the like. Once identification has been established to the satisfaction of the host, a password is issued orally to the visitor. The host then set up an electronic visitor's badge for the host on the webserver 5, including the agreed password and the agreed access rights for the visitor. The electronic visitor's badge now resides on webserver 5 and awaits collection by the visitor.

The visitor can now set up a data link over the Internet to control server, 6 on a channel 24. It should be noted that the different communications channels 24, 35, 27, 26 and 25 are labelled for easy identification in the drawings and may, in fact, represent a single communications link. The visitor is then requested to give her/his password, which is authenticated by the password protection unit 20, which, in turn, permits the electronic badge to be transmitted to the visitor's computer. On receipt by the visitor's computer, the electronic password, which as previously stated is a Java applet, runs on the visitor's computer. The electronic badge causes a number of icons to be displayed on the visitor's computer, 10, 11, and 12. By actuating the icons, the visitor obtains access via firewall 7, to the applications 13, 14 and 15

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running on the application computer 34. The firewall operates to control the applications and data files to which the visitor can obtain access in accordance with the password instructions encoded in the electronic visitor's badge and the access rules held on server 16, all of which can be controlled via the control server 6, and control panel 4.

Although, as illustrated in the drawings, the administration computer, 19, and the application computer, 34, may be distinct data processing machines, it is also possible to realise both computers on a single data processing machine.

Consider the following scenario.

Two persons, a visitor and host, agree to hold a meeting over Internet. The host has, at his disposal, a computer system called the Control Lab Room System, and is prepared to host the meeting on this computer. On the telephone, the host and the visitor agree on the name and password for a visitor's badge which will then be created. The host sits by the control panel of the Control Lab Room System and creates this visitor's badge, and at this stage connects certain privileges to the badge. For example, the visitor will be allowed, on showing his/her badge, the right to use the MS-Netmeeting software available on the application computer. The visitor's badge is lodged on the webserver which belongs to the system. The visitor then draws and activates the badge via a special website, the reception. The name and password to get access to the badge are those which the host and the visitor have agreed on the telephone. The host will see when the badge has been activated, via the control panel and, if the host gives a receipt for the activation, the conference will commence. The visitor's badge has control codes which enable the visitor to request access to a range of functions available on the application computer, e.g. video, or a protected webserver. The host and the visitor start by using MS_Netmeeting. Since the host created the visitor's badge with rights for this equipment, it will start without any fresh intervention via the control panel.

After a while, however, the visitor wants to establish a connection with a video camera which shows the host's conference room. Before he/she has requested permission to do this, he/she starts his/her video client. When this

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happens, the control panel displays an alarm message, which shows that a visitor is trying to use a function for which the visitor has not been granted access rights. The host now asks the visitor, via the telephone link, if the attempt emanated from the visitor and, on receipt of a positive response, allocates, via a simple button press, the visitor with the right to establish the connection.

Now, suppose a hacker, called Charlie, tries to get access to the same video channel. Earlier in the week Charlie had intercepted IP-traffic which contained a visitor's badge. However, when he tried to use the badge, the host immediately identified the badge as time expired, and immediately excluded him from the conference. This time Charlie tries to steal the visitor's video flow. He is stopped once again, this time because the control server of the Control Lab Room System does not succeed in communicating with the visitor's badge which all authorized visitors must have. This causes a new alarm to be given. If the visitor, via the telephone, does not affirm that he has just opened a new client session, and the host is not satisfied that this second session also belongs to the visitor, the host refuses connection. Furthermore, the host will ignore all inquiries from that source for the remainder of the conference. The rest of the conference turns out well and, at the end of the conference, the host withdraws the visitor's badge by means of the control server, via its channel to the badge, issuing an instruction to the badge to self destruct.

In slightly more technical detail the course of events can be explained as follows.

The firewall informs the control server of an attempt to establish a connection which, based on pre-existing rules, the status of the visitor's badge and user control from the control panel, accepts, or denies, the connection, by creating a rule for the firewall to follow for this and similar connection attempts.

The visitor's badge is the critical point. Because it is an applet, it must be shown in a webreader on the visitor's screen in order to execute. If it is clicked away, it stops executing, and with that ceases to be valid. The source code of the visitor's badge includes the visitor's identity, together with the time period(s) for

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which it is valid. It must show this information to make the control server accept a connection from it and, implicitly, from the location from which a person attempts to access the application computer.

5 The control server is the hub of the system. The control server creates the visitor's badge in accordance with instructions received from the control panel and places the visitor's badge on the webserver as described above. When the badge has been drawn from the webserver, it establishes contact with the control server. If the badge is still active, all manipulations the host performs with the badge on the control panel are reflected on the badge at the visitor's computer, and vice versa.
10 The control server also controls the firewall, which provides the security for the conference.

The firewall has a number of rules to follow, like all firewalls. The difference here is that the host can dynamically change these rules, based on:

- judgment of the telephone part of the conference; and
- 15 - the guarantee the visitor's badge gives about the identity of the person operating the computer connected through, or seeking connection through, the firewall.

20 The control panel gives the host a view of the whole system. All badges which have been distributed can be seen here, together with the functions that are active. All events which the host can influence in the system are shown on the control panel via the same interface as the visitor has, i.e. the badge.

CLAIMS

1. A telecommunications system adapted to act as a platform for electronic meetings, comprising a visitor's computer, an administration computer, an application computer, a firewall protecting said application computer and a transmission path over the Internet, characterised in that communications between said visitor's computer and said application computer are mediated by an electronic badge generated by said administration computer and operating on said visitor's computer.

2. A telecommunications system, as claimed in claim 1, characterised in that said administration computer and application computer are realised on a single data processing machine.

3. A telecommunications system, as claimed in claim 1, characterised in that said administration computer and application computer are distinct data processing machines, and in that communications between said visitor's computer and said application computer are controlled by a firewall located in said administration computer.

4. A telecommunications system, as claimed in any previous claim, characterised in that said administration computer is protected by a firewall.

5. A telecommunications system, as claimed in any previous claim, characterised in that said electronic badge is an applet containing data identifying a visitor, a password, and a list of access rights relating to software applications running on said application computer.

6. A telecommunications system as claimed in claim 5, characterised in that said list of access rights may permit access to one, or more, software applications.

7. A telecommunications system, as claimed in either claim 5, or 6, characterised in that said applet is adapted to run on said visitor's computer and

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cause one, or more, icons to be displayed on a VDU associated with said visitor's computer.

8. A telecommunications system, as claimed in any previous claim, characterised in that said administration computer includes a control panel linked to a web server adapted to issue electronic badges.

9. A telecommunications system, as claimed in claim 8, characterised in that said administration computer includes a control server linked to said control panel and said web server, and a database of access rules linked to said control server.

10. A telecommunications system, as claimed in claim 9, characterised in that said control server is linked to a firewall protecting said application computer, and in that said database of access rules is linked to said firewall protecting said application computer.

11. A telecommunications system, as claimed in claim 10, characterised in that access to said webserver is controlled by a password protection means.

12. A telecommunications system, as claimed in any of claims 8 to 11, characterised in that an electronic visitor's badge can be created from said control panel and deposited for collection on said webserver.

13. A telecommunications system, as claimed in any of claims 8 to 12, characterised in that said visitor's computer can download said electronic visitor's badge by accessing said web server and giving a password and visitor identification.

14. A telecommunications system, as claimed in any of claims 8 to 13, characterised in that access rights associated with said visitor's badge can be altered while said visitor computer is connected to said application computer.

15. A telecommunications system, as claimed in any of claims 8 to 14, characterised in that said visitor's badge is adapted to self destruct on receipt of a

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signal from said control server.

5 16. A method of establishing access for a visitor's computer to an application computer protected by a firewall generated by an administration computer, over the Internet, characterised by mediating communications between said visitor's computer and said application computer with an electronic badge generated on said administration computer and operating on said visitor's computer.

17. A method, as claimed in claim 16, characterised by realising said administration computer and said application computer on a single data processing machine.

10 18. A method, as claimed in claim 16, characterised by realising said administration computer and application computer as distinct data processing machines, and by controlling communications between said visitor's computer and said application computer through a firewall located in said administration computer.

15 19. A method, as claimed in any of claims 16 to 19, characterised by protecting said administration computer with a firewall.

20. A method, as claimed in any of claims 16 to 19, characterised by said electronic badge being an applet containing data identifying a visitor, a password, and a list of access rights relating to software applications running on said application computer.

20 21. A method, as claimed in claim 20, characterised by said list of access rights permitting access to one, or more, software applications.

22. A method, as claimed in either claim 20, or 21, characterised by said applet running on said visitor's computer and causing one, or more, icons to be displayed on a VDU associated with said visitor's computer.

25 23. A method, as claimed in any of claims 16 to 22, characterised by said administration computer including a control panel linked to a web server adapted

to issue electronic badges.

24. A method, as claimed in claim 23, characterised by the steps of:

- establishing a voice link over the PSTN between a person operating said visitor's computer, herein referred to as a visitor, and a person operating said administration computer, herein referred to as a host;
- said host establishing that said visitor has clearance to access said application computer, and
- assigning and communicating a password to said visitor over said voice link.

25. A method, as claimed in either claim 23, or 24, characterised by said administration computer including a control server linked to said control panel and said web server, and a database of access rules linked to said control server.

26. A method, as claimed in claim 25, characterised by said control server being linked to a firewall protecting said application computer, and by said database of access rules being linked to said firewall protecting said application computer.

27. A method, as claimed in claim 26, characterised by controlling access to said webserver with a password protection means.

28. A method, as claimed in any of claims 24 to 27, characterised by said host creating an electronic visitor's badge by actuation of said control panel and depositing said electronic visitor's badge, for collection by said visitor, on said webserver.

29. A method, as claimed in any of claims 24 to 28, characterised by said visitor accessing said webserver over the Internet, giving said password, and downloading said electronic visitor's badge.

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30. A method, as claimed in any of claims 24 to 29, characterised by the steps of:

- said visitor requesting access, while connected to said application computer, to a first software application, not pre-authorised on said electronic visitor's badge;
- said control panel giving an alarm condition;
- said host confirming over said voice link that said visitor has requested access to said first software application; and
- modifying the access rights associated with said electronic visitor's badge via said control panel.

31. A method, as claimed in any of claims 24 to 30, characterised by said visitor's badge self destructing on receipt of a signal from said control server.

32. An administration computer, for use with a telecommunications system adapted to act as a platform for electronic meetings, said administration computer having a firewall protecting an application computer, characterised in that said administration computer is adapted to create an electronic badge to mediate communications between a visitor's computer and said application computer.

33. An administration computer, as claimed in claim 32, characterised in that said administration computer and application computer are realised on a single data processing machine.

34. An administration computer, as claimed in claim 32, characterised in that said administration computer and application computer are distinct data processing machines.

35. An administration computer, as claimed in any of claims 32 to 34, characterised in that said administration computer is protected by a firewall.

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36. An administration computer, as claimed in any of claims 32 to 34, characterised in that said electronic badge is an applet containing data identifying a visitor, a password, and a list of access rights relating to software applications running on said application computer.

5 37. An administration computer as claimed in claim 36, characterised in that said list of access rights may permit access to one, or more, software applications.

38. An administration computer, as claimed in either claim 36, or 37, characterised in that said applet is adapted to run on said visitor's computer and cause one, or more, icons to be displayed on a VDU associated with said visitor's computer.

39. An administration computer, as claimed in any of claims 32 to 38, characterised in that said administration computer includes a control panel linked to a web server adapted to issue electronic badges.

15 40. An administration computer, as claimed in claim 39, characterised in that said administration computer includes a control server linked to said control panel and said web server, and a database of access rules linked to said control server.

41. An administration computer, as claimed in claim 40, characterised in that said control server is linked to a firewall protecting said application computer, and in that said database of access rules is linked to said firewall protecting said application computer.

42. An administration computer, as claimed in claim 41, characterised in that access to said webserver is controlled by a password protection means.

25 43. An administration computer, as claimed in any of claims 36 to 42, characterised in that an electronic visitor's badge can be created from said control panel and deposited for collection on said webserver.

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44. An administration computer, as claimed in any of claims 36 to 42, characterised in that access rights associated with said visitor's badge can be altered while a visitor computer is connected to said application computer.

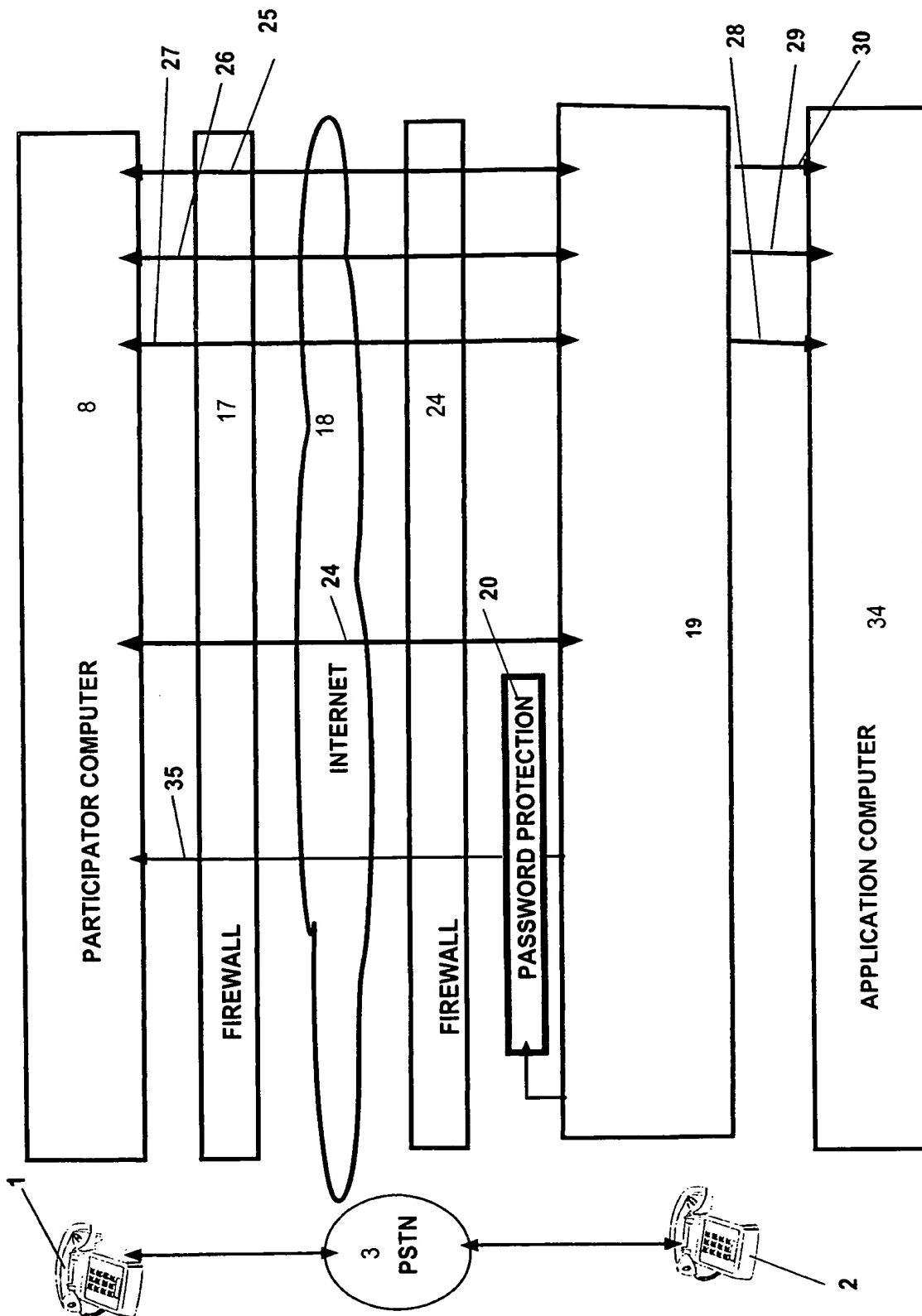


FIGURE 1

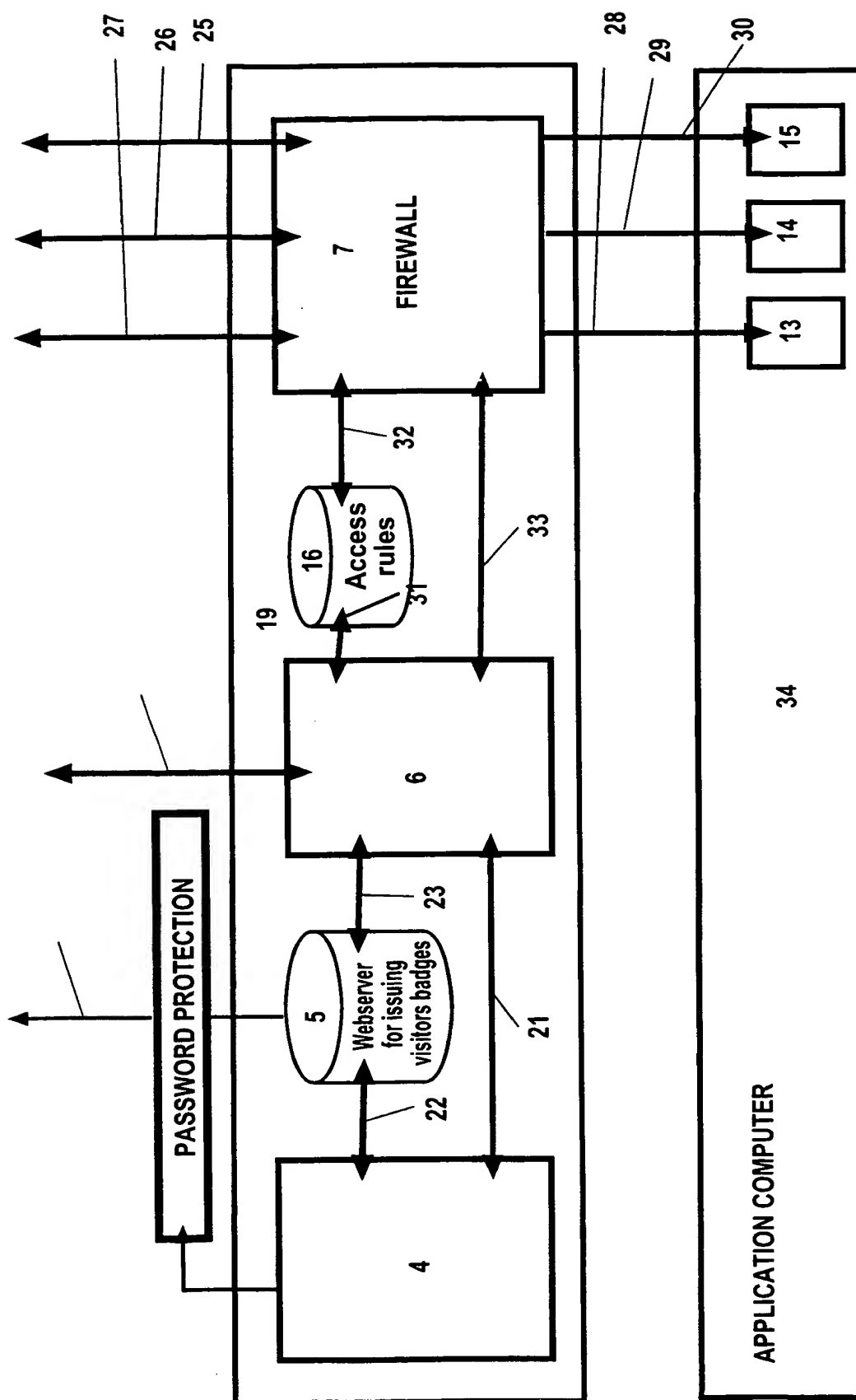


FIGURE 2

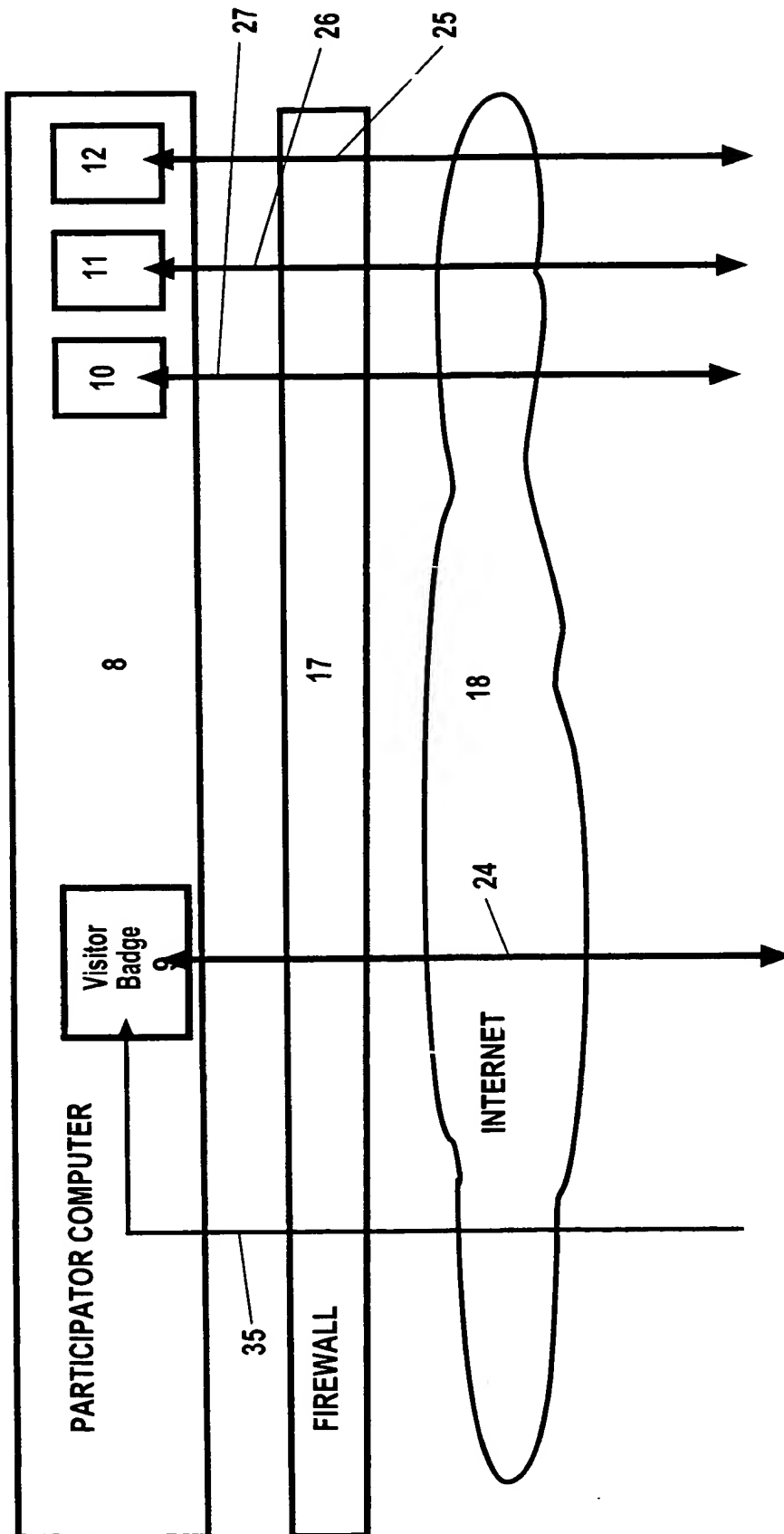


FIGURE 3

TENT COOPERATION TRE Y

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
 United States Patent and Trademark
 Office
 Box PCT
 Washington, D.C.20231
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in its capacity as elected Office

Date of mailing (day/month/year) 07 January 2000 (07.01.00)	
International application No. PCT/SE99/00516	Applicant's or agent's file reference Case 667 PCT
International filing date (day/month/year) 30 March 1999 (30.03.99)	Priority date (day/month/year) 01 April 1998 (01.04.98)
Applicant GRINNEBY, Stefan	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

01 November 1999 (01.11.99)

☐ in a notice effecting later election filed with the International Bureau on:
2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer C. Cupello Telephone No.: (41-22) 338.83.38
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